```
Minimum
Maximum
                                                                                                                                                                                      Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM protein
                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
:
                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seq
9eq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length:
                                                                                                                                                                            Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    July 1, 2003, 17:47:40 ; Search time 81 Seconds (without alignments) 1032.779 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               671580 seqs, 206047115
US-09-782-587B-1
2187
                                                                                                                                                                                                                                                                                                                                                                                                                                                 SPTREMBL_21:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ANAFLXXLRPGSLXRXCKXX.....LQKLMRSEPRPGVLLRAPFP 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen
                                                                                                                                                                                                                                                                                                                                                      sp_phage:*
                                                                                                                                                                                                                                                                                                                                                                                                                                      sp_archea: *
                                                                                                                                                                                                                                                                                                                                                                 sp_organelle:*
                                                                                                                                                                                                                                                                                                                                                                                                                             sp_bacteria:*
                                                                                                                                                                                                                                                                              sp_bacteriap:*
                                                                                                                                                                                                                                                                                                              sp_vertebrate: *
                                                                                                                                                                                                                                                                                                                       sp_virus:*
                                                                                                                                                                                                                                                                                         sp_rvirus:*
                                                                                                                                                                                                                                                                                                   sp_unclassified:*
                                                                                                                                                                                                                                                                                                                                  sp_rodent:*
                                                                                                                                                                                                                                                                                                                                          sp_plant:*
                                                                                                                                                                                                                                                                                                                                                                            p_mhc: *
                                                                                                                                                                                                                                                                                                                                                                                     p_mammal:∗
                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000000000
                                                                                                                                                                                                                                                                                                                                                                                               _invertebrate: *
                                                                                                                                                                                                                                                                                                                                                                                                         _human:*
433
469
461
481
482
488
460
460
460
                                                                                                                                                                            DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gapext 0.5
                  Q14316
1 054740
1 063207
1 099132
1 099132
Q95ND6
Q9TTRO
Q9TTRO
Q28510
Q28510
                                                                                                            Q96PQ8
Q61109
Q90YK1
Q9GMD9
Q95ND7
                                                                                                                                                                            Ħ
                                                                                                                                                                                                         SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            671580
     Q95nd6 pan troglod
Q9ttr0 canis famil
Q28510 macaca mula
Q91vn8 mus musculu
Q91pc6 mus musculu
                                                                                                          Q61109 mus musculu
Q90yk1 brachydanio
Q9gmd9 ornithorhyn
Q95md7 pan troglod
                                                                                                   01431
                                                                                                                                                    Q96pq8 homo sapien
                                                                                                                                                                        Description
                                                       088947 mus musculu
099132 mus musculu
                                                                             054740 mus musculu
063207 rattus norv
                                                                                                 17 pan troglod
16 homo sapien
```

5	4	L	2	-	0	9	8	37	8	ü	4	ü	32	μ	30	29	28	27	26	25	24	23	22	21	20	19	18	/ 1
410.5	411	411.5	414	414.5	415	415	415.5	416	417	418	418.5	419	419.5	420	422	424	425	427	431	441.5	446	453	456.5	458	463.5	464.5	470.5	477
				19.0													•	•	19.7	•	20.4	20.7	•	•	•		21.5	•
267	490	250	505	247	812	244	855	812	787	624	331	467	868	701	809	492	237	607	399	1089	339	277	799	643	653	624	624	638
ហ	11	u	v	13	11	3	11	11	S	0	11	S	u	11							11	IJ	1	σ	11	1	H	H
Q9BK47	Q920K3	Q9V514	Q966V4	Q9W7Q5	Q91WJ5	Q8QGW3	Q9JJI7	Q9R0W3	Q9VEY6	Q95ME7	Q8R1A6	Q967x8	EATA6D	Q9JJS9	Q9PTW7	Q96T73	Q91515	. 091001	Q9CQW3	Q8T3A0	Q99L44	096899	Q9DBIO	097506	Q8VCS4	Q91Y47	Q9DAT3	Q8R0P5
luidia f	Q920k3 rattus norv		Q966v4 halocynthia		mus muscu	anguil]			Q9vey6 drosophila	0	Q8rla6 mus musculu	Q967x8 panulirus a		Q9jjs9 rattus norv	str		Q91515 fugu rubrip		m sum		099144 mus musculu	3001	0 mus	e ens	≡us	Bus	Bus	Q8r0p5 mus musculu

## ALIGNMENTS

```
Pfam; PF00008; EGF; 2.
Pfam; PF00594; gla; 1.
Pfam; PF00047; ig; 2.
Pfam; PF000089; trypsin; 1.
SMART; SM00181; EGF; 2.
                                                       PROSITE;
PROSITE;
PROSITE;
PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                          Q96PQ8 PRELIMINARY; PRT; 701 AA.
Q96PQ8;
Q1-DEC-2001 (TrEMBLrel. 19, Created)
Q1-DEC-2001 (TrEMBLrel. 19, Last sequence upda
Q1-MAR-2002 (TrEMBLrel. 20, Last annotation upp
Factor VII active site mutant immunoconjugate.
Homo sapiens (Human).
                                                                                                                                                                               InterPro; IPR003006;
InterPro; IPR001254;
InterPro; IPR000294;
                                                                                                                                                                                                                                                                           "Targeting tissue factor on tumor vascular endothelial cells and tumor cells for immunotherapy in mouse models of prostatic cancer."; Proc. Natl. Acad. Sci. U.S.A. 98:12180-12185(2001).

EMBL; AF272774; AAK58686.1; -.
                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                  Hu Z.,
                                                                                                                                                                                                                                                                                                                                               MEDLINE=21477448; PubMed=11593034;
                                                                                                                                                                                                                        nterPro;
                                                                                                                                                                                                                                      InterPro;
                                                                                                                                                                                                                                                 InterPro; IPR00015
InterPro; IPR00056
                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                  Garen A.;
                                                                                                   PS0001
                                                                                                                                                                                                                                                 IPR000152; Asx_hydroxyl.
IPR000561; EGF-like.
2; EGF_1;

16; EGF_2; UNKNOWN_1.

187; EGF_CA; UNKNOWN_1.

1011; GLU_CARBOXYLATION; U'

11 GLMHC; UNKNOWN_1.
                                                                                             ASX_HYDROXYL; UNKNOWN_1.
                                                                                                                                                                         Ig_MHC.
Ser_protease_Try.
VitK_dep_GLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
Last sequence update)
Last annotation update)
                                         UNKNOWN_1.
```

```
OR RESULT OF COLOR RESULT OF C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SORR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local s
Matches 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse).
Eukaryota; Metazoa; Ch
Mammalia; Eutheria; Ro
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q61109; PRELIMINARY;
Q61109; O1-NOV-1996 (TIEMBLIEL C
O1-NOV-1996 (TIEMBLIEL C
O1-JUN-2002 (TIEMBLIEL C
Coagulation factor VII.
F7 OR EVII.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE: PS00134; 1
PROSITE: PS00135; 1
Hydrolase: Serine E
SEQUENCE 701 AA;
                                                                                                                                                                                                                                                                                   Idusogie E., Rosen Castellino F.J.;
                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=96276538; PubMed=8701412; Idusogie E., Rosen E., Geng J.P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              al Similarity
395; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ANAFLXXLRPGSLXRXCKXXQCSFXXARXIFKDAXRTKLFWISYSDGDQCASSPCONGGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IVSWGQGCATVGHFGVYTRVSQYIEWLQKLMRSEPRPGVLLRAPFP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IVSWGQGCATVGHFGVYTRVSQYIEWLQKLMRSEPRPGVLLRAPFP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ANAFLEELRPGSLERECKEEQCSFEEAREIFKDAERTKLFWISYSDGDQCASSPCQNGGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TRYPSIN_HIS; UNKNOWN_1.
TRYPSIN_SER; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protease.
; 77826 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98.8%;
97.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21,01,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 2161; DB 4;
Pred. No. 1.5e-202;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94AC6CEB42CC992F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                 Carmeliet
                                                                                                                                                                                                                                                                                                      FAMILY
                                                                                                                                                                                                                                                                                                                                                    murine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                              .
.
                                                                                                                                                                                                                                                                                                        S1;
                                                                                                                                                                                                                                                                                                                                                coagulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                                      ALSO KNOWN
                                                                                                                                                                                                                                                                                                                                                                                              Collen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 701;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Euteleostomi; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                              Ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
RESULT
ID OYKI
ID OYKI
OO
AC Q9
DT 01
DT 01
OT 01
OT 01
RESULT
RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              D Q90YK1 PRELIMINARY; PRT; 433 AA.

C Q90YK1;
C Q90YK1;
C Q90YK1;
T Q1-DEC-2001 (TEMBLrel. 19, Created)
T Q1-DEC-2001 (TEMBLrel. 19, Last sequence update)
T Q1-UN-2002 (TEMBLrel. 21, Last annotation update)
E Coagulation factor VII.
S Brachydanio rerio (Zebrafish) (Zebra danio).
C Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutel
C Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cyy
C Cyprinidae; Danio.
X NCBL_TaxID-7955;
SEQUENCE FROM N.A.
MEDLINE-21353085; Pu
Sheehan J., Templer
```

PubMed=11459993; er M., Gregory M.,

Hanumanthaiah

Troyer

. D

Euteleostom1;

Cypriniformes;

```
Query Match
Best Local S
Matches 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R PRINTS; PRO072; CHYDON,
R PRINTS; PRO072; CHYDOND.
R SMART; SM00019; EGF_CA; 1.
R SMART; SM00010; EGF_IIKe; 1.
R SMART; SM00001; EGF_IIKe; 1.
R SMART; SM00009; GLA; 1.
R SMART; SM000070; ALDEHYDE_DEHYDR_CYS; UNKNOWN_1.
R PROSITE; PS00010; ASX_HYDROXYL; UNKNOWN_1.
R PROSITE; PS000215; CRYSTALLIN_BETAGAMMA; UNKNOWN_1.
R PROSITE; PS00022; EGF_1; UNKNOWN_1.
R PROSITE; PS00022; EGF_0A; 1.
R PROSITE; PS01187; EGF_CA; 1.
R PROSITE; PS00011; GLU_CARBOXYLATION; 1.
R PROSITE; PS00013; TRYPSIN_DM; 1.
R PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
R PROSITE; PS00135; TRYPSIN_SER; 1.
Calcium-binding; EGF-like domain; Glycoprotein; Hydrolase; Ref
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Serine protease.
SEQUENCE 446 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00008; EGF; 2. Pfam; PF000594; gla; 1. Pfam; PF00089; trypsin;
      402
                                   361
                                                                                                 301
                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                     102
                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                           42
                                                                                                                                                                                                                                                                                                                                                                                           1 ANAFLXXLRPGSLXRXCKXXQCSFXXARXIFKDAXRTKLFWISYSDGDQCASSPCONGGS
                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity 67.8
VSWGEGCAAIGHIGVYTRVSQYIDWLVRHMDSKLQVGV-FRLP
                 NVPRLMTODCLQOSRKVGDSPNITEYMFCAGYSDGSKDSCKGDSGGPHATHYRGTWYLTG
                                                                                                                                                                                   EVPRLMTQDCLEHAKHSSNTPKITENMFCAGYMDGTKDACKGDSGGPHATHYHGTWYLTG
                                                                                                                                         HDIALLRLHQPVVLTDHVVPLCLPERTFSERTLAFVRFSLVSGWGGLLDRGATALELMVL
                                                                                                                         HDIALLRLHRPVTFTDYVVPLCLPEKSFSENTLARIRFSRVSGWGQLLDRGATALELMSI
                                                                                                                                                                                                                                                                                                                                                                         ANSLLEELWPGSLERECNEEQCSFEEAREIFKSPERTKQFWIVYSDGDQCASNPCQNVGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IPR000294;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Α,
                                                                                                                                                                                                                                                                                                                                                                                                                                                       71.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         50318 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VitK_dep_GLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                           46;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. 7.166; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 1558.5;
Pred. No. 7.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      482FD09BEFDA6870 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        .le-144;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 446
                                404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                        1;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                         341
                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                    221
                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                               161
                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                           101
```

KNOWN

AS

proteases

'n

æ

```
InterPro, IPRUV--
InterPro, IPRUV--
Pfam; PF00008; EGF; 2.
Pfam; PF00594; gla; 1.
Pfam; PF00594; gla; 1.
SMART; SM00179; EGF_CA; 2.
R PROSITE; PS00022; EGF_1; UNKNOWN_1.
DR PROSITE; PS001186; EGF_2; UNKNOWN_2.
DR PROSITE; PS00136; GLU_CARBOX/LATION; UNKNOWN_1.
DR PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
DR PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_SER; UNKNOWN_1.
HVdrolase; Serine protease.
433 AA; 48680 MM; CD9D1B179601BA4C
471.8%; Score 913.5; DB
Pred. No. 8.6e-8
   RESULT

QSMD9

ID M9

AC Q9

AC Q0

A
                                                                                                                                                                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                        Q9GMD9 PRELIMINARY;
Q9GMD9;
01-MAR-2001 (TrEMBLTel. 16, C:
01-MAR-2001 (TrEMBLTel. 21, L:
Coagulation factor X.
                                                                                   Ornithorhynchus anatinus (Duckbill platypus).

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Monotremata; Ornithorhynchidae; Ornithorhynchus.
   Poorafshar M.,
                SEQUENCE FROM N.A. MEDLINE-21015017; PubMed-11132153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Phan T., Thankavel B., Jagadeeswaran P.; "Demonstration of the extrinsic coagulation pathway in teleostel: Identification of zebrafish coagulation factor VII."; Proc. Natl. Acad. Sci. U.S.A. 98:8768-8773(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; AY040345; AAK74192.1; -. MEROPS; S01.215; -.
                                                                        NCBI_TaxID=9258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                             362
                                                                                                                                                                                                                                                                                                                                                                                                344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      284
                                                                                                                                                                                                                                                                                                                              399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                           VPRLMTQDCLQQSRKVGDSPNITEYMFCAGYSDGSKDSCKGDSGGPHATHYRGTWYLTGI
                                                                                                                                                                                                                                                                                                                                                  VSWGQGCATVGHFGVYTRVSQYIEWLQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                             DIALLRLHOPVVLTDHVVPLCLPERTFSERTLAFVRFSLVSGWGOLLDRGATALELMVLN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IYKPTWILTAAHCLEKLK-VKFLRIVAGEHDLEVDEGTEQLIQVDQMFTHPAYVSETADS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KCRSHEVEPCGKVPLLQAGKAADHQVDLRSRIVGGSECPKGHCPWQVLLKYGEKGFCGGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SYMCLCAPGFSGRHCEQSIGDVLDSCLHDNGGCEHFCTEQDG-RRNCSCADGYYLDNSGQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SYICFCLPAFEGRNCETHKDDQL-ICVNENGGCEQYCSDHTGTKRSCRCHEGYSLLADGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LKTGNLERECLEEKCSYEEAREVFEHTEATNEFWKIYDVKDHCASSPCEHDGLCTTQNAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LRPGSLXRXCKXXQCSFXXARXIFKDAXRTKLFWISYSDGDQCASSPCQNGGSCKDQ-LQ
                                                                                                                                                                                                                                                                                                                          VSWGKGCARPGSYGIYTRVSNYLQWIRQ
                                                                                                                                                                                                                                                                                                                                                                                                VPRIRTQECVQVS--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LINTIWVVSAAHCFDKIKNWRNLIAVLGEHDLSEHDGDEQSRRVAQVIIPSTYVPGTTNH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SCTPTVEYPCGKIPILEKRNASKPQ----GRIVGGKVCPKGECPWQVLLLVNGAQLCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IPR001881; EGF_Ca.
IPR001254; Ser_protease_Try.
IPR000294; V1tK_dep_GLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPR000561;
IPR000742;
 Aveskogh M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EGF-like.
                                                                                                                                                           Created)
Last sequences
Last anno
                                                                                                                                                                                                                                                                                                                                                                                   Munday
                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CD9D1B179601BA4C CRC64;
                                                                                                                                                       sequence update) annotation update)
 8.,
                                                                                                                                                                                                                                   469
                                                                                                                                                                                                                                                                                                                          426
                                                                                                                                                                                                                                                                                                                                                           389
Hellman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ນB 13;
9.6e-81:
ອຸຣ
                                                                                                                                                                                                                                   ₿
۲.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 433;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                               343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     · Ø
            밁
                                            οy
                                                                                   밁
                                                                                                                  Š
                                                                                                                                                     망
                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                           οy
                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00001; GLABLOOD.
SMART; SM00181; EGF; 2.
SMART; SM00179; EGF_CA; 1.
SMART; SM00001; EGF_Like; 2.
SMART; SM00069; GLA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS00010; A
PROSITE; PS00022; E
PROSITE; PS01186; E
PROSITE; PS001187; E
PROSITE; PS00011; G
PROSITE; PS00240; T
PROSITE; PS00134; T
PROSITE; PS00135; T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hydrolase;
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro;
InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TRYPSIN FAMILY EMBL; AF275654; AAC HSSP; P00742; 1XKB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Identification and structural analysis o monotreme, the platypus, Ornithorhynchus Immunogenetics 52:19-28(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR001254;
InterPro; IPR000294;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR001881; InterPro; IPR002383;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEROPS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY:
            450
                                                                                   392
                                                                                                                    318
                                                                                                                                                       335
                                                                                                                                                                                          258
                                                                                                                                                                                                                            278
                                                                                                                                                                                                                                                               198
                                                                                                                                                                                                                                                                                                  218
                                                                                                                                                                                                                                                                                                                                     152
                                                                                                                                                                                                                                                                                                                                                                      158
                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                             101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PF00008; EGF; 2.
PF00594; gla; 1.
PF00089; trypsin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SM00020;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                201
           TKAATFLSWIKRMMRQK
                                                                                                   GDSPNITEYMECAGYSDGSKDSCKGDSGGPHATHYRGTWYLTGIVSWGQGCATVGHEGVY
                                                                                                                                                  VSPACLPEKDWAEDILMNQKAGVVSGFGRVHEKGRPSTVLKMLEVPYVERTTCKQSS---
                                                                                                                                                                                                                    TTLAEPGENALVRIVGGRECHDGECPWQALLVNDENGQGFCGGTILNEYYILSAAHCHD
                                                                                                                                                                                                                                                                                                                                                                                                    LADGVSCTPTVEYPCGKIPI-LEKRNASKPQG------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CKDQLQSYICFCLPAFEGRNCETHKDDQLICVNENGGCEQYCSDHTGTKRSCRCHEGYSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ANAFLXXLRPGSLXRXCKXXQCSFXXARXIFKDAXRTKLFWISYSDGDQCASSPCQNGGS
                                              TRVSQYIEWLQKLMRSE
                                                                                                                                                                                     VVPLCLPERTFSERTLAFVRFSLVSGWGQLLDRGATALELMVLNVPRLMTQDCLQQSRKV
                                                                                                                                                                                                                                                                                                                                                               GDDQKSCIPTVPFPCGKLTVGRRKRSRELPEEQDGDNAHVAEDVLEATENPFEAEPPDQN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ANSLFEELKKGNLERECNEETCSYEEAREVFEDTDKTNEFWNIYKDGNQCETQPCQNQGV
                                                                                                                                                                                                                                                                                                                                                                                                                                       CKDGLAEYTCLCSAGYEGKNCDT--TTVKICSLNNGDCEQFCKSVVNTV-VCSCAQGYIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPR000742;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IPR000152;
IPR001314;
                                                                             SFDITPNMFCAGYDSRPEDACQGDSGGPHVTKYKDTYFVTGIVSWGEGCAQNGKFGVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Serine protease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GLA; 1.
Tryp_SPc;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ASX_HYDROXYL; UNKNOW_1.
EGE_1; UNKNOWN_1.
EGE_2; 2.
EGE_CA; 1.
EGL_CARBOXYLATION; 1.
TRYPSIN_DOM; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAG00453.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BELONGS TO PEPTIDASE FAMILY S1; ALSO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TRYPSIN_SER;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TRYPSIN_HIS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; Asx_hydroxyl.; Chymotrypsin.; EGF-like.; EGF_2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      52196 MW; 4C66C230D0758F6A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    39.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EGF_Ca.
GLA_blood.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VitK_dep_GLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ser_protease_Try.
           466
                                              394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 863; DB 6;
Pred. No. 8.3e-76;
'2; Mismatches 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of four serine s anatinus.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 469;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
```

54;

Gaps

. . . . .

217 151 157 120 100 60

377

391

449

```
RESULT

OPENITOR

OPENITOR
                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                               문
                                                                                                                                                          S
                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local s
Matches 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Comparison of DNA and protein polymo chimpanzees.";
Genes Genet. Syst. 0:0-0(2001).
EMBL; AB062470; BAB58885.1; JOINED.
EMBL; AB062458; BAB58885.1; JOINED.
EMBL; AB062468; BAB58885.1; JOINED.
EMBL; AB062464; BAB58885.1; JOINED.
EMBL; AB062464; BAB58885.1; JOINED.
EMBL; AB062464; BAB58885.1; JOINED.
EMBL; AB062468; BAB58885.1; JOINED.
EMBL; AB062468; BAB58885.1; JOINED.
INTERPOOP IPRO00152; ASL, hydroxy1.
InterPro; IPRO00561; EGF_C1.
InterPro; IPRO001881; EGF_C3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hydrolase;
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR000742; E
InterPro; IPR001881; E
InterPro; IPR001254; S
InterPro; IPR000294; V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q95ND7;
Q95ND7;
Q1-DEC-2001
Q1-DEC-2001
Q1-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE;
PROSITE;
PROSITE;
PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=9598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pan troglodytes (Chimpanzee).
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Satta Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Coagulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            υ
                                                                                                                                                                                                                                   234
                                                                                                                                                                                                                                                                                                         160
                                                                                                                                                                                                                                                                                                                                                                               174
                                                                                                                                                                                                                                                                                                                                                                                                                                                 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              163;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11 GSLXRXCKXXQCSFXXARXIFKDAXRTKLFWISYSDGDQCASSPCQNGGSCKDQLQSYIC 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PF00008; EGF; 2.
PF000594; gla; 1.
PF00089; trypsin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E; PS00010; ASX_HYDROXYL; UNKNOWN_1.

E; PS00102; EGF_1; UNKNOWN_1.

PS001186; EGF_2; UNKNOWN_2.

E; PS01187; EGF_CA; UNKNOWN_1.

PS001187; EGF_CA; UNKNOWN_1.

PS000117; GIU_CARBOXYLATION; UNKNOWN_1.

E; PS00134; TRYPSIN_DOM; 1.

FSP00134; TRYPSIN_HIS; UNKNOWN_1.

FSP00135; TRYPSIN_SER; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
RF·-SLVSGWGQLLDRGATALELMVLNVPRLMTQDCLQQSRKVGDSPNITEYMFCAGYSD
                                                                                                                                                                                                             KPGQFPWQVVLNGKVDAFCGGSIVNEKWIVTAAHCVDTGVK----ITVVAGEHNIEETEH
                                                                                                                                                                                                                                                                    PKGECPWQVLLLVNGAQLCGGTLINTIWVVSAAHCFDK-IKNWENLIAVLGEHDLSEHDG
                                                                                                                                                                                                                                                                                                                                                 VPFPCGRVSVSQTSKLTRAETVFPDVDYVNSTEAETILDNITQSTQSFNDFTRVVGGEDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WCPFGFEGKNCEL----DVTCNIKNGRCEQFCKNSADNKVVCSCTEGYRLAENQKSCEPA
                                                                                                                 DEQSRRVAQVIIPSTYVPGTT--NHDIALLRLHQPVVLTDHVVFLCLPERTFSERTLAFV
                                                                                                                                                                                                                                                                                                                                                                                                                              VEYPCGKIPILEKRNASKPQ------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FCLPAFEGRNCETHKDDQLICVNENGGCEQYCSDHTGTKRSCRCHEGYSLLADGVSCTPT 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GNIERECMEEKCSFEEAREVFENTERTTEFWKQYVDGDQCESNCCLNGGSCKDDINSYEC
                                                                     TEOKRNVIRTIPHHNYNAAINKYNHDIALLELDEPLVLNSYVTPICIADK---EYTNIFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (Tremblrel. 19, of the control of 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA and protein polymorphims between humans and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   51764 MW; 30C2F857C0F77F45 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    38.8%; Score 849; DB 6; Length 461; 39.3%; Pred. No. 1.9e-74; tive 70; Mismatches 130; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ser_protease_Try.
V1tK_dep_GLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        , Created)
, Last sequence upo
, Last annotation (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Pan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           461
                                                                                                                                                                                                                                                                                                                                                                                                                           -----GRIVGGKVC 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                         233
                                                                         346
                                                                                                                                                                                                                 289
                                                                                                                                                                                                                                                                                   218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            117
```

```
Query Match
Best Local Sir
Matches 161;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                PRINTS: PRO0010; EGFELOOD.

PRINTS: PRO0001; EGFELOOD.

SMART; SM00179; EGF_CA; 1.

SMART; SM00069; GLA; 1.

SMART; SM00069; GLA; 1.

SMART; SM00020; Tryp_Spc; 1.

PROSITE; PS00010; ASX_HYDROXYL; UNKNOWN_1.

PROSITE; PS01186; EGF_1; UNKNOWN_1.

PROSITE; PS01186; EGF_2; 2.

PROSITE; PS01187; EGF_CA; 1.

PROSITE; PS01187; EGF_CA; 1.

PROSITE; PS00114; GLU_CARBOXYLATION; 1.

PROSITE; PS00134; TRYPSIN_DOM; 1.

PROSITE; PS00134; TRYPSIN_SER; 1.
                                                                                                                                                                                                                                                                                                                                        InterPro: IPR000152; Asx_hydroxyl.
InterPro: IPR001314; Clymotrypsin.
InterPro: IPR0007561; EGF-11ke.
InterPro: IPR000742; EGF_2.
InterPro: IPR001881; EGF_Ca.
InterPro: IPR001438; EGF_II.
InterPro: IPR0012383; GAL_blood.
InterPro: IPR001234; Ser_protease_Try.
InterPro: IPR000294; VitK_dep_GLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AL033403; CAA2:
EMBL; X55008; CAB3824
HSSP; P00740; 1CFH.
MEROPS; S01.214; -
InterPro; IPR000152;
InterPro; IPR001314;
                                                                                                                                                                                                                                                                                Pfam; PF00008; EGF; 2.
Pfam; PF00594; gla; 1.
Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
                                                                                      Calcium-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q14316 PRELIMINARY; PRT; 456 AA.
Q14316;
Q14316;
Q1-WOV-1996 (TrEMBLrel. 01, Created)
Q1-WOV-1999 (TrEMBLrel. 11, Last sequence update)
Q1-JUN-2002 (TrEMBLrel. 21, Last annotation update)
F9 (Coagulation factor IX (Plasma THROMBOPLASTIC component, christmas
G1sease, HAEMOPHILIA B)) (Factor IX).
F9 OR FACTOR IX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "The putative factor IX gene promoter in hemophilia B Leyden."; Blood 72:1074-1076(1988)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sriet E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Reitsma P.A., Bertina R.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 3-19 FROM N.A. MEDLINE-88327116; PubMed-3416069;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
Bird C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TRYPSIN FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       347
                                                                         protease
                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GSKDSCKGDSGGPHATHYRGTWYLTGIVSWGQGCATVGHFGVYTRVSQYIEWLQK 389
| :||:||:||:||:||:|:::
| GGRDSCQGDSGGPHVTEVEGTSFLTGIISWGEECAMKGKYGIYTKVSRYVNWIKE 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (NOV-1998) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAB38245.2;
                                                            Ŗ,
                                                                               EGF-like domain; Glycoprotein; Hydrolase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAA21954.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BELONGS
                                                           51149 MW;
38.7%; Score 847; DB 4; 38.9%; Pred. No. 2.9e-74; tive 71; Mismatches 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ploos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                         54E20A1B3964E234 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          van
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Amstel J.K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              databases
                            Length 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Riemens A.,
                                                                                  Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 401
```

Conservative

Indels

50;

Gaps

```
RESULT
OS4740
ID
AC
OS64740
OS6
OSC
OS7670
OS776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-JUN-1998 (TrEMBLrel 06, 01-JUN-1998 (TrEMBLrel 06, 01-JUN-2002 (TrEMBLrel 21,
                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-98454993; PubMed-9783672; Heidtmann H.H.; Kontermann R.E.; "Cloning and recombinant expressi Thromb. Res. 92:33-41(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse). Plasmid pBluescript.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Coagulation F10 OR FA10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE-LIVER;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                        PRINTS;
                                                                                          PRINTS;
                                                                                                                                                                                                                                                       InterPro;
                                                                                                                                                                                                                                                                                        MEROPS; S01.216; MGD; MGI:103107;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID-10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                054740
                                                                                                                                                           [nterPro
                                                                                                                                                                        InterPro;
                                                                                                                                                                                         InterPro;
                                                                                                                                                                                                         InterPro;
                                                                                                                                                                                                                      InterPro;
                                                                                                                                                                                                                                         InterPro;
                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: BELONGS TRYPSIN FAMILY.
                                      ; PR000008; EGF; 2.
; PF00594; gla; 1.
; PF00089; trypsin; 1.
; PF00722; CHYMOTRYPS
TS; PR00721; GLABLOOD.
TS; RM00179; EGF_CA; 1.
T; SM00171; EGF_11ke; 1
                                                                                                                                                                                                                                                                                                                           P00742;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GRDSCQGDSGGPHVTEVEGTSFLTGIISWGEECAMKGKYGIYTKVSRYVNWIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            F--SLVSGWGQLLDRGATALELMVLNVPRLMTQDCLQQSRKVGDSPNITEYMFCAGYSDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GSLXRXCKXXQCSFXXARXIFKDAXRTKLFWISYSDGDQCASSPCONGGSCKDQLQSYIC
                                                                                                                                                        IPR000294;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FGSGYVSGWGRVFHKGRSALVLQYLRVPLVDRATCLRSTKF---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EQSRRVAQVIIPSTYVPGTT--NHDIALLRLHQPVVLTDHVVPLCLPERTESERTLAFVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PKGECPWQVLLLVNGAQLCGGTLINTIWVVSAAHCFDKIKNWRNLIAVLGEHDLSEHDGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VPFPCGRVSVSQTSKLTRAETVFPDVDYVNSTEAETILDNITQSTQSFNDFTRVVGGEDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VEYPCGKIPILEKRNASKPQ-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GNLERECMEEKCSFEEAREVFENTERTTEFWKQYVDGDQCESNPCLNGGSCKDDINSYEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EQKRNVIRIIPHHNYNAAINKYNHDIALLELDEPLVLNSYVTPICIADK---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WCPFGFEGKNCEL - - -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FCLPAFEGRNCETHKDDQLICVNENGGCEQYCSDHTGTKRSCRCHEGYSLLADGVSCTPT
                                                                                                                                                                                                                                                         IPR001314;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                           1XKA.
                    EGF_CA; 1.
EGF_Like; 1.
EGF_like; 1.
GLA; 1.
                                                                                                                                                                                                                                                                                                                                         CAA10933.1;
     Tryp_SPc; 1
                                                                                                                                                                                                                                                                                          F10.
                                                                                    CHYMOTRYPSIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ×
                                                                                                                                                                                    EGF_2.
EGF_2.
EGF_Ca.
GLA_blood.
                                                                                                                                                                                                                                                       Chymotrypsin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           el. 06, Last se
el. 21, Last an
precursor (EC
                                                                                                                                                     Ser_protease_Try.
VitK_dep_GLA.
                                                                                                                                                                                                                                                                       Asx_hydroxyl
                                                                                                                                                                                                                                                                                                                                                                      TO PEPTIDASE FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                       expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -DVTCNIKNGRCEOFCKNSADNKVVCSCTEGYRLAENQKSCEPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        t sequence update) t annotation update (EC 3.4.21.6).
                                                                                                                                                                                                                                                                                                                                                                                                       of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                       mouse coagulation factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ⋧
                                                                                                                                                                                                                                                                                                                                                                     S1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         update)
                                                                                                                                                                                                                                                                                                                                                                      ALSO KNOWN AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TIYNNMFCAGFHEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -GRIVGGKVC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EYTNIFLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 70
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STT KW CDR CDR
```

```
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local :
 carboxylase.";
Thromb. Res. 8:
-!- SIMILARITY
                                                                                                                                                                                                         01-NOV-1996
01-NOV-1996
01-MAR-2002
                               SEQUENCE FROM N.A.
STRAIN-SPRAGUE-DAWLEY;
MEDLINE-96093365; PubMed-8578539;
Stanton C., Ross R.P., Hutson S., Wallin R.;
Evidence for competition between vitamin K-dependent clotting for intracellular processing by the vitamin K-dependent gamma-
                                                                                                                                                       Eukaryota;
Mammalia; F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHAIN
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Repeat;
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE;
PROSITE;
PROSITE;
PROSITE;
PROSITE;
PROSITE;
                                                                                                                           NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                 Q63207
                                                                                                                                                                              Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE; PS00135; Calcium-binding;
                                                                                                                                                                                                                                                                                                                                      450
                                                                                                                                                                                                                                                                                                                                                                378
                                                                                                                                                                                                                                                                                                                                                                                            390
                                                                                                                                                                                                                                                                                                                                                                                                                       318
                                                                                                                                                                                                                                                                                                                                                                                                                                                  335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E; PS00010; ASX_HYDROXYL; UNKNOWN_1.
E; PS00022; EGF_1; UNKNOWN_1.
E; PS01186; EGF_2; 2.
E; PS01187; EGF_CA; 1.
E; PS01011; GLU_CARBOXYLATION; 1.
E; PS00011; GLU_CARBOXYLATION; 1.
E; PS0134; TRYPSIN_DOM; 1.
E; PS00135; TRYPSIN_HIS; UNKNOWN_1.
E; PS00135; TRYPSIN_ER; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Serine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GNDGKSCISTAPFPCGKITTGRRKRSVALNTSDSELDLEDALLDEDFLSPTENPIELLNL
                                                                                                                                                                                                                                                                                                                                  TKVTTFLKWIDRSMKARVGP
                                                                                                                                                                                                                                                                                                                                                         TRVSQYIEWLQKLMRSEPRP
                                                                                                                                                                                                                                                                                                                                                                                       GDSPNITEYMFCAGYSDGSKDSCKGDSGGPHATHYRGTWYLTGIVSWGQGCATVGHFGVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CKDQLQSYICFCLPAFEGRNCETHKDDQLICVNENGGCEQYCSDHTGTKRSCRCHEGYSL
                                                                                                                                                    ; Metazoa;
Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                               VAPACLPOKDWAESTLMTOKTGIVSGFGRTHEKGROSNILKMLEVPYVDRNTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VVPLCLPERTFSERTLAFVRFSLVSGWGQLLDRGATALELMVLNVPRLMTQDCLQQSRKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IXNWRNLIAVLGEHDLSEHDGDEQSRRVAQVIIPSTYVPGTTNHDIALLRLHQPVVLTDH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NASKPQG-----RIVGGKVCPKGECPWQVLLL-VNGAQLCGGTLINTIWVVSAAHCFDK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LADGVSCTPTVEYPCGKI-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CRDGIGGYTCTCSEGFEGKNCELFV--RKLCRLDNGDCDQFCREEQNSV-VCSCASGYFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ANSFFEEFKKGNLERECMEEICSYEEVREIFEDDEKTKEYWTKYKDGDQCESSPCQNQGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ANAFLXXLRPGSLXRXCKXXQCSFXXARXIFKDAXRTKLFWISYSDGDQCASSPCONGGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ARREK - - - VRVGDRNTEKEDGNELVHEVDVVIKHNKFQRDTYDYDIAVLRLKTPITERMN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NETQPERSSDDLVRIVGGRECKDGECPWQALLINEDNEGFCGGTILNEFYILTAAHCLHQ
                                                                                                                                                                                                         (TrEMBLrel.) (TrEMBLrel.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                38.0%;
ilarity 36.8%;
Conservative 8
 80:63-73(1995)
TY: BELONGS TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protease;
                                                                                                                                                  s (Rat).
Da; Chordata;
ia; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       : TRYPSIN_SER; 1.
EGF-like domain; Glycoprotein; Hydrolase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481 C
53986 MW;
                                                                                                                                                                                                         01,
20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Signal.
PEPTIDASE
                                                                                                                                                                                                         Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   82;
                                                                                                                                                                                                                                    Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 832;
Pred. No. 9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COAGULATION FACTOR CF702DE5EF9D97AE
                                                                                                                                                    Craniata; Vertebrata; | Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POTENTIAL
                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                   469
                                                                                                                                                                                                                                                                                                                                                               397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
 FAMILY
                                                                                                                                                                                                                                                                482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 11;
9.3e-73;
                                                                                                                                                                                                                                                                AA
S1;
                                                                                                                                                                                                         update)
ALSO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 481;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                  Euteleostomi; ; Murinae; Rattus.
KNOWN
ΑS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plasmid;
HE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PI-LEKR
                                                     factors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                   377
                                                                                                                                                                                                                                                                                                                                                                                       449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100
                                                                                                                                                                                                                                                                                                                                                                                                                                              389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               œ
```

```
Pfam; PF00000; trypsin; 1.
Pfam; PF00059; trypsin; 1.
Pfam; PF00089; trypsin; 1.
Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00001; GLABLOOD.
SMARR; SM00001; EGF_CA; 1.
SMARR; SM00001; EGF_Like; 1.
SMARR; SM00001; Tryp_SPC; 1.
SMARR; SM00001; ASX_HYDROXYL; 1.
PROSITE; PS00010; ASX_HYDROXYL; 1.
PROSITE; PS001186; EGF_2; 2.
DR PROSITE; PS01187; EGF_CA; 1.
DR PROSITE; PS01187; EGF_CA; 1.
DR PROSITE; PS00134; TRYPSIN_DOM; 1.
DR PROSITE; PS00134; TRYPSIN_HS; UNKNOWN_1.
DR PROSITE; PS00134; TRYPSIN_HS; UNKNOWN_1.
DR PROSITE; PS00135; TRYPSIN_SER; 1.

Calcium-binding; EGF-like domain; Glycoprotein; Hydrolase; WW Hydroxylatlon; Repeat; Serine protease.
WW Hydroxylatlon; Hydrolase; 1.

**Corre 831.5; DB 11; Length 48; 1.

**Corre 831.5; DB 11; Length 48; 1.
  RESULT 9
088947
ID 0889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ϋ́
                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 088947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; X79807;
HSSP; P00742;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR000294;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRYPSIN FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 101
                                                                                                                                                                                                377
                                                                                                                                                                                                                                                       390
                                                                                                                                                                                                                                                                                                                                                                  335
                                                                                                                                                                                                                                                                                                                                                                                                                     257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       218
                                                                                                                                          450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S01.216;
                                                                                                                                                                                                                                                                           QAKREK---VRVGDLNTEQEDGGEMVHEVDMIKHNKFQRDTYDFDIAMLRLKTPITFRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KIKNWRNLIAVLGEHDLSEHDGDEQSRRVAQVIIPSTYVPGTTNHDIALLRLHQPVVLTD: | : | : | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NASKPQG------RIVGGKVCPKGECPWQVLLLVNGAQ--LCGGTLINTIWVVSAAHCFD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GNDGKSCLSTAPFPCGKTNKGRAKRSVALNTSNSEPDPEDLMPDADILYPTESPSELLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CRDGLGSYTCTCTEGFEGKNCELFV--RKLCSLDNGDCDQFCREEQNSV-VCSCAKGYFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CKDQLQSYICFCLPAFEGRNCETHKDDQLICVNENGGCEQYCSDHTGTKRSCRCHEGYSL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ANSFFEEIKKGNLERECVEEICSFEEAREVFEDNEKTTEFWNKYEDGDQCESSPCONQGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ANAFLXXLRPGSLXRXCKXXQCSFXXARXIFKDAXRTKLFWISYSDGDQCASSPCQNGGS
                                                                                                                                                                    YTRVSQYIEWLQKLMRSEPRP
                                                                                                                                                                                                                                         NKTEPEANSDDVIRIVGGQECKRGECPWQALLFSDEETDGFCGGTILNEFYILTAAHCLH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LADGVSCTPTVEYPCGKI-----
                                                                                                                                                                                                                                                                                                                                                            NVAPACLPOKDWAEATLMTOKTGIVSGFGRTHEKGROSKVLKMNEVPYVDRNTC----R
                                                                                                                                    YTKVTAFLKWIDRSMKARVGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPRO00152; Asx_hydroxyl.
IPRO01314; Chymotrypsin.
IPRO00561; EGF-11ke.
IPRO00742; EGF-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IPR0012
     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1XKA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAA56202.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                54; Ser_protease_Try.
94; V1tK_dep_GLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EGF_Ca.
GLA_blood.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              38.0%; Score 831.5; DB 11; 36.1%; Pred. No. 1e-72; tive 83; Mismatches 144;
  PRT;
                                                                                                                                                                                           397
481
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ----PILEKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              55,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100
                                                                                                                                                                                                                                                                                                                                                                                                                316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           217
                 Ş
                                                                       밁
                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                  OF THE STANDARD REPORTED TO THE STANDARD FOR THE STANDARD STANDARD
```

```
Query Match
Best Local S
Matches 161
                                                                                                                                                                                                R PRINTS; PRO0001; GLABLOOD.

R SMART; SM00019; EGF_L1ke; 1.

R SMART; SM00019; EGF_L1ke; 1.

R SMART; SM00009; GLA; 1.

R SMART; SM00000; ASK_HYDROXYL; UNKNOWN_1.

R PROSITE; PS00010; ASK_HYDROXYL; UNKNOWN_1.

R PROSITE; PS01186; EGF_2; 2.

R PROSITE; PS01186; EGF_2; 2.

R PROSITE; PS01187; EGF_2; 2.

R PROSITE; PS011187; EGF_2; 2.

R PROSITE; PS010114; GLU_CARBOXYLATION; 1.

R PROSITE; PS00114; TRYPSIN_DOM; 1.

R PROSITE; PS00114; TRYPSIN_BER; 1.

R PROSITE; PS00135; TRYPSIN_SER; 1.

Calclum-binding; EGF-like domain; Glycoprotein; Hydrolase; Rep.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
STRAIN-C57BL6 X CBA; TISSUE-LIVER;
MEDLINE-98347933; Pubmed-9684791;
Liang Z., Cooper A., DeFord M.E., Cal
Castellino F.J., Rosen E.D.;
"Cloning and characterization of a.cl
factor X.";
                                                                                                                                       CHAIN
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           088947;
01-NOV-1998
01-NOV-1998
01-MAR-2002
                                                                                                                                                                                       Calcium-binding; EGF-lik
Serine protease; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                   PRINTS; PR00722; PRINTS; PR00001;
                                                                                                                                                                         SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; AF211347; AAC256345.1; EMBL; AF211347; AAF22980.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Cloning and Characterization of the Thromb. Haemost. 0:0-0(2000).
-i- SIMILARITY: BELONGS TO PEPTIDASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sclurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pram;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro: IPR002383;
InterPro: IPR001254;
InterPro: IPR000294;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEROPS; S01.216; -. MGD; MGI:103107; F10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cooper A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-129SJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Coagulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HSSP; P00742;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Thromb. Haemost. 80:87-91(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID-10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR000742;
InterPro; IPR001881;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro: IPR000561;
InterPro: IPR000742;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR000152;
InterPro; IPR001314;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TRYPSIN FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                PF00008; EGF; 2.
PF00594; gla; 1.
PF00089; trypsin; 1
   41
                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S01.21
ANSFFEEFKKGNLERECMEEICSYEEVREIFEDDEKTKEYWTKYKDGDQCESSPCQNQGA
                              ANAFLXXLRPGSLXRXCKXXQCSFXXARXIFKDAXRTKLFWISYSDGDQCASSPCQNGGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B (TrEMBLrel. (
B (TrEMBLrel. (
2 (TrEMBLrel. 2
n factor X prec
                                                                                                                                       481 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Liang
                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1XKA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHYMOTRY PSIN.
                                                                                                                                     481
54018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Asx_hydroxyl.
Chymotrypsin.
EGF-like.
EGF_2.
EGF_2.
EGF_Ca.
EGA_blood.
GLA_blood.
Ser_protease_Try.
Vitk_dep_GLA.
                                                                                     38.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Castellino F.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20,
20,
                                                                                                                                       WW;
                                                                     83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .: .:
                                                                  Score 830; DB 11;
Pred. No. 1.5e-72;
3; M1smatches 142;
                                                                                                                                    POTENTIAL.
COAGULATION FACTOR
8AC09DE5EF9D271E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Carmeliet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             , Rosen
Murine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E.D.;
Factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P., Collen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S1; ALSO
                                                                                                                                     CRC64;
                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   murine coagulation
                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KNOWN
                                                                                                     481;
                                                                   54
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ΑS
                                                                                                                                                                                                       Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             THE
                                                                  Gaps
100
                                60
```

19

CKDQLQSYICFCLPAFEGRNCETHKDDQLICVNENGGCEQYCSDHTGTKRSCRCHEGYSL

```
RESULT
Q99L32
                                                                                                                                          PRINTS; PRO0001; GLABLOOD.

SMART; SM00181; EGF; 2.

SMART; SM00001; EGF_11ke; 2.

SMART; SM00000; GLA; 1.

SMART; SM00000; Tryp_SPc; 1.

PROSITE; PS00010; ASX_HYDROXYL; UNKNO PROSITE; PS00022; EGF_1; UNKNOWN_1.

PROSITE; PS01186; EGF_2; 2.

PROSITE; PS01187; EGF_CA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (FEB-2001) to t
-1. SIMILARITY: BELONGS T
TRYPSIN FAMILY.
EMBL; BC003877; AAH03877.
HSSP; P00742; 1XKA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (Mouse).
Mus musculus (Mouse).
Chordata;
Aberia; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2002 (TrEMBLrel. 21, Coagulation factor X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q99L32;
                                                                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                                                                                                                                               InterPro;
InterPro;
                                                                                                                                                                                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Strausberg R.
                                                                                                                                                                                                                                                                                                                                         nterPro;
                                                                                                                                                                                                                                                                                                                                                           nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                       interPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EROPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                               nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; P00742;
PS; S01.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101
                                                                                                                                                            PR00722; CHYMOTRYPSIN, PR00001; EGFBLOOD. PR00001; GLABLOOD.
                                                                                                                                                                                                                                                                       ; IPRO00152; Asx_hydroxyl.
; IPRO01314; Chymotrypsin.
; IPR000561; EGF-11ke.
; IPR000742; EGF_2.
; IPR001881; EGF_Ca.
; IPR001438; EGF_II.
; IPR001254; Ser_protease_Try.
; IPR000294; VitK_dep_GLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TKVTTFLKWIDRSMKARVGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TRVSQYIEWLQKLMRSEPRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STSFSITQNMFCAGYEAKLEDACQGDSGGPHVTRFKNTYYVTGIVSWGEGCARKGKYGIY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GDSPNITEYMFCAGYSDGSKDSCKGDSGGPHATHYRGTWYLTGIVSWGQGCATVGHFGVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VAPACLPOKDWAESTLMTOKTGIVSGFGRTHEKGROSNILKMLEVPYVDRNTC----KL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VVPLCLPERTFSERTLAFVRFSLVSGWGQLLDRGATALELMVLNVPRLMTQDCLQQSRKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ARREK---VRVGDRNTEKEEGNEMVHEVDVVIKHNKFQRDTYDYDIAVLRLKTPITERMN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NETQPERSSDDLVRIVGGRECKDGECPWQALLINEDNEGFCGGTILNEFYILTAAHCLHQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GNDGKSCISTAPFFCGKITTGRRKRSVALNTSDSELDLEDALLDEDFLSPTENPIELLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LADGVSCTPTVEYPCGKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRDGIGGYTCTCSEGFEGKNCELFV--RKLCRLDNGDCDQFCREEQNSV-VCSCASGYFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NASKPQG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAH03877.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -RIVGGKVCPKGECPWQVLLL-VNGAQLCGGTLINTIWVVSAAHCFDK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the
TO F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PEPTIDASE FAMILY S1; ALSO KNOWN AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Created)
Last sequence tast annual
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      397
                                                                UNKNOWN_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence update) annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Euteleostomi;
; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PI-LEKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
Q95ND6
  DR RELL DR RECEPTOR OF THE PROPERTY OF THE PRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SORROR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 161
                                                                                                                                                                    "Comparison of chimpanzees.";
                                                                                                                                                                                                                                                                                                                                                                                 095ND6;
01-DEC-2001
01-DEC-2001
01-MAR-2002
Coagulation
                                                                                            Genes
EMBL;
EMBL;
EMBL;
                                                                                                                                                                                                                              SEQUENCE FROSTRAIN-505;
                  EMBL;
EMBL;
EMBL;
EMBL;
                                                                                                                                                                                                                                                                                                     Pan troglodytes (Chimpanzee).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=9598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q95ND6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS00011; GLU_CARBOXYLATION; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UKNOWN_1.
PROSITE; PS00135; TRYPSIN_SER; 1.
Calcium-binding; EGF-11ke domain; Glycoprotein; Hydrolase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Serine protease.
SEQUENCE 481 P
            es Genet. Syst. 0:0-0(2001).

(c) AB062471; BAB58886.1; JOINED.

(c) AB062459; BAB58886.1; JOINED.

(c) AB062461; BAB58886.1; JOINED.

(c) AB062463; BAB58886.1; JOINED.

(c) AB062467; BAB58886.1; JOINED.

(c) AB062469; BAB58886.1; JOINED.

(c) AB062469; BAB58886.1; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 161;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 ANAFLXXLRPGSLXRXCKXXQCSFXXARXIFKDAXRTKLFWISYSDGDQCASSPCQNGGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CKDQLQSYICFCLPAFEGRNCETHKDDQLICVNENGGCEQYCSDHTGTKRSCRCHEGYSL
                                                                                                                                                                                                                                                   FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VAPACLPQKDWAESTIMTQKTGIVSGEGRTHEKGRQSNIIKMLEVPYVDRNTC----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LADGVSCTPTVEYPCGKI------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CRDGIGGYTCTCSEGFEGKNCELFV--RKLCRLDNGDCDQFCREEQNSV-VCSCASGYFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TKVTTFLKWIDRSMKARVGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TRVSQYIEWLQKLMRSEPRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GDSPNITEYMFCAGYSDGSKDSCKGDSGGPHATHYRGTWYLTGIVSWGQGCATVGHFGVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STSFSITQNMFCAGYEAKLEDACQGDSGGPHVTRFKNTYYVTGIVSWGEGCARKGKYGIY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NETOPERSSDDLVRIVGGRECKDGECPWOALLVNEDNEGFCGGTILNEFYILTAAHCLHO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NASKPOG-----RIVGGKVCPKGECPWOVLLL-VNGAQLCGGTLINTIWVVSAAHCFDK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GNDGKSCISTAPFPCGKITTGRRKRSVALNTSDSELDLEDALLDEDFLSPTENPIELLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ANSFFEEFKKGNLERECMEEICSYEEVREIFEDDEKTKEYWTKYKDGDQCESSPCQNQGA
IPR000152;
                                                                                                                                                                                                                                                                                                                                                                                     1 (TrEMBLrel.
1 (TrEMBLrel.
2 (TrEMBLrel.
n factor XI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                   z
                                                                                                                                                                                        DNA and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ξ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           54004 MW;
Asx_hydroxyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               37.9%;
                                                                                                                                                                                        protein
                                                                                                                                                                                                                                                                                                                                                                                                     19,
19,
20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          b; Score 829; DB
b; Pred. No. 1.8e
83; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                   Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    469
                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata;
Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                        polymorphims between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BD88E96C8A0B7E7F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8e-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                       Euteleostomi;
                                                                                                                                                                                        humans
                                                                                                                                                                                        and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PI-LEKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
```

2

377 389 317

334 257 277 197

144 157 120 100 60

밁 õ 밁 δ 밁 ő 밁 Š 밁 õ 밁 õ 밁

```
RRITAR RANKOOC OR DITTO
                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                    밁
                                                                                                                                                                                                                  å
                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                               Q9TTRO
                                                                                                                  01-MAY-2000 (TrEMBLrel.
01-MAY-2000 (TrEMBLrel.
01-MAR-2002 (TrEMBLrel.
             "Molecular characterization and protein C gene.";
                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; NCBI_TaxID-9615;
                               Brenig B.;
                                       SEQUENCE FROM N.A.
Leeb T., Kopp T.,
                                                                                          Canis familiaris (Dog)
                                                                                                            Protein C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00008; EGF; 2.
Pfam; PF00594; gla; 1.
Pfam; PF00089; trypsin; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hydrolase;
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS01187;
PROSITE; PS00011;
PROSITE; PS50240;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS00135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ROSITE; PS00134;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     interPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro;
     Genome 10:135-139(1999).
                                                                                                                                                                                                                                     347
                                                                                                                                                                                                    402
                                                                                                                                                                                                                                                                        290
                                                                                                                                                                                                                                                                                                           234
                                                                                                                                                                                                                                                                                                                           160
                                                                                                                                                                                                                                                                                                                                             174
                                                                                                                                                                                                                                                                                                                                                             131
                                                                                                                                                                                                                                                                                                                                                                                   58
                                                                                                                                                                                                                                                                                                                                                                                                                                11
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                        GSKDSCKGDSGGPHATHYRGTWYLTGIVSWGGGCATVGHFGVYTRVSQYIEWLQK 389
                                                                                                                                                                                                                                                                                                    GSLXRXCKXXQCSFXXARXIFKDAXRTKLFWISYSDGDQCASSPCQNGGSCKDQLQSYIC
                                                                                                                                                                                             GGRDSCQGDSGGPHVTEVEGTSFLTGIISWGEECAMKGKYGIYTKVSRYVNWIKE
                                                                                                                                                                                                                               KFGSGYVSGWGRVFHKGRSALVLQYLRVPLVDRATCLRSTKF----TIYNNMFCAGFHE
                                                                                                                                                                                                                                                RF--SLVSGWGQLLDRGATALELMVLNVPRLMTQDCLQQSRKVGDSPNITEYMFCAGYSD
                                                                                                                                                                                                                                                                  TEQKRNVIRIIPHHNYNAAINKYNHDIALLELDEPLVLNSYVTPICIADK---EYTNIFL
                                                                                                                                                                                                                                                                             DEQSRRVAQVIIPSTYVPGTT--NHDIALLRLHQPVVLTDHVVPLCLPERTFSERTLAFV
                                                                                                                                                                                                                                                                                                                     PKGECPWQVLLLVNGAQLCGGTLINTIWVVSAAHCFDK-IKNWRNLIAVLGEHDLSEHDG
                                                                                                                                                                                                                                                                                                                                      VPFPCGRVSVSQTSKLTRAETVFPDVDYVNSTEAETILDNITQTPQSXXXXTRXVGGEDX
                                                                                                                                                                                                                                                                                                                                                        VEYPCGKIPILEKRNASK-----RIVGGKVC
                                                                                                                                                                                                                                                                                                                                                                        WCPFGFEGKNCEL----DVTCNIKNGRCEQFCKNSADNKVVCSCTEGYRLAENQKSCEPA
                                                                                                                                                                                                                                                                                                                                                                                                          GNLERECMEEKCSFEEAREVFENTERTTEFWKQYVDGDQCESNPCLNGGSCKDDINSYEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PS00010; ÀSX_HYDROXYL; UNKNOWN_1.
PS00022; EGF_1; UNKNOWN_1.
PS01186; EGF_2; UNKNOWN_2.
PS01187; EGF_CA; UNKNOWN_1.
                                                                                                            precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IPR001881; EGF_Ca.
IPR001254; Ser_protease_Try.
IPR000294; V11K_dep_GLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IPR000561;
IPR000742;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   461 AA;
                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                       Deppe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protease.
; 51695 MW; 8F5A69A525DF65B5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRYPSIN_HIS; UNKNOWN_1.
TRYPSIN_SER; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GLU_CARBOXYLATION; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TRYPSIN_DOM; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                     37.7%; Score 825; DB 6; Length 461; 39.3%; Pred. No. 4.2e-72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EGF-like.
EGF_2.
                                       Α.
                                                                                                                     13,
20,
                                                                                                                 Created)
Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                 68;
                                       Breen
                                                                                                                                                       PRT;
                    chromosomal assignment of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches 132;
                                     .
.
                                                                                                                                                      456
                                      Matis
                                                                                                                                                      ₹
                                     u.,
                                    Brunnberg
                                                                                                                                                                                                                                                                                                                                                                                                                                               ::ndels
                                                                        Euteleostomi;
Canis.
                                     ۲.,
                    canine
                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                               456
                                                                                                                                                                                                                                                                                                                                                                                          130
                                                                                                                                                                                                                                401
                                                                                                                                                                                                                                                 334
                                                                                                                                                                                                                                                                   346
                                                                                                                                                                                                                                                                                    276
                                                                                                                                                                                                                                                                                                                                       233
                                                                                                                                                                                                                                                                                                                                                                                                           117
8
              Ş
                                  밁
                                               ð
                                                                    밁
                                                                                    Š
                                                                                                      용
                                                                                                                      δÃ
                                                                                                                                         밁
                                                                                                                                                         δõ
                                                                                                                                                                           망
                                                                                                                                                                                          Ş
                                                                                                                                                                                                             밁
```

```
Query Match
Best Local Sin
Matches 165;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SMART; SMO0181; EGF; 2.

SMART; SM00069; GLA; 1.

SMART; SM00069; GLA; 1.

SMART; SM00069; GLA; 1.

PROSITE; PS00010; ASX_HUDROXYL; 1.

PROSITE; PS00010; ASX_HUDROXYL; 1.

PROSITE; PS01186; EGF_2; 2.

PROSITE; PS01187; EGF_CA; 1.

PROSITE; PS00011; GLU_CARBOXYLATION; 1.

PROSITE; PS00013; TRYPSIN_DOM; 1.

PROSITE; PS00134; TRYPSIN_DOM; 1.

PROSITE; PS00135; TRYPSIN_HUG; UNKNOWN_1.

PROSITE; PS00135; TRYPSIN_SER; 1.

COLICIUM-binding; EGF-11ke domain; Glycoprotein; Hyd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hydroxylation;
SIGNAL 1
CHAIN 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PRO0722; CHYMOTRYPSIN
PRINTS; PRO0001; GLABLOOD.
SMART; SM00181; EGF; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ptam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AJ001979;
HSSP; P04070; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Leeb T., Pfeiffer I., Kopp T., Deppe A., Brenig I "Analysis of canine protein C gene polymorphisms Anim. Genet. 30:237-238(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR000294;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         [nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR00188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              interPro; IPR00056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                interPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR000152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEROPS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -1- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-99371952; PubMed-10443005;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TRYPSIN FAMILY
                                                 339
                                                                                                                        281
                                                                                                                                                                278
                                                                                                                                                                                                                                         221
                                                                                                                                                                                                                                                                            163
                                                                                                                                                                                                                                                                                                                    161
                                                                                                                                                                                                                                                                                                                                                                                             103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PF00089;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
ACEGDSGGPMVTSFRGTWFLVGLVSWGEGCGRLHNYGIYTKVSRYLDWIHSHIRGE
                         SCKGDSGGPHATHYRGTWYLTGIVSWGQGCATVGHFGVYTRVSQYIEWLQKLMRSE 394
                                                                                                          VSGWGQLLD--RGATALELMVLNVPRLMTQDCLQQSRKVGDSPNITEYMFCAGYSDGSKD 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ANSFLEEIRAGSLERECMEEICDFEEAKEIFQNVDDTLAYWSKYVDGDQCAALPPEHACD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S01.218
                                                                                                                                                    DVDIKEVLIHPNYSKSTTDNDIALLHLAQPAIFSQTIVPICLPDSGLAERELTQVGQETV
                                                                                                                                                                             SRRVAQVIIPSTYVPGTTNHDIALLRLHOPVVLTDHVVPLCLPERTFSERTLAFV-RFSL
: :|:| | | | |::|||| | |:::||
                                                                                                                                                                                                                               ESPWQVVLLDSKKKLACGAVLIHTSWVLTAAHCMEDSK---KLIVRLGEYDLRRWEKGEM
                                                                                                                                                                                                                                                     ECPWQVLLLVNGAQL-CGGTLINTIWVVSAAHCFDKIKNWRNLIAVLGEHDLSEHDGDEQ
                                                                                                                                                                                                                                                                                                        SCAPGYRLGDDHLQCQPAVKFPCGRPGKQMEKKRKHLKRDTNQTDQIDPRLVNGKVTRRG
                                                                                                                                                                                                                                                                                                                                            RCHEGYSLIADGVSCTPTVEYPCGKI-PILEKR-----NASKPQGRIVGGKVCPKG
                                                                                                                                                                                                                                                                                                                                                                                 SPCCGHGSCIDGIGAFHCDCGRGWEGRFCO-HEVSYINCSLDNGGCSHYCLEEEG-GRHC
                                                                                                                                                                                                                                                                                                                                                                                                                     SPCQNGGSCKDQLQSYICFCLPAFEGRNCETHKDDQLICVNENGGCEQYCSDHTGTKRSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ANAFLXXLRPGSLXRXCKXXQCSFXXARXIFKDAXRTKLFWISYSDGDQCAS-----
                                                                               VTGWGYRSETKRNRTFV-LNFINIPVAPHNECIQAMYNM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IPR002383;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ÅĄ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1PCU.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAA05126.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        456
50813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36.4%; Score 796.5; DB 6 39.7%; Pred. No. 2.6e-69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ser_protease_Try
V1tK_dep_GLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chymotrypsin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GLA_blood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Asx_hydroxyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EGF-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Serine protease; Signal, POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROTEIN C LIGHT CHAIN.
PROTEIN C CONNECTING DIPEPTIDE.
PROTEIN C HEAVY CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7AD3A8C1C34E59FF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           144;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         л
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hydrolase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length

    ISENMLCAGILGDSRD

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KNOWN AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               456;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ພ
ພ
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                               391
                                                                                                                                                                                         280
                                                                                                                                                                                                                                                                                                                                               162
                                                                                                                                                                                                                                 277
                                                                                                                                                                                                                                                                                                                                                                                   160
                                                                                                                                                                                                                                                                                                                                                                                                                                                            102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    52
```

```
RESULT OF SERVICE SERV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 13
02851
AC 02851
AC 02851
AC 02851
DT 01-NO
DR PROSI
DR HYDE
DR PROSI
DR PRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ØΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-NOV-1996
01-NOV-1996
01-MAR-2002
                                                                                                                                                                                                                                                                                                         091WN8;
01-DEC-2001 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                           8NM160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-NOV-1996 (TrEMBLrel. 01, Created 01-NOV-1996 (TrEMBLrel. 01, Last as 01-MAR-2002 (TrEMBLrel. 20, Last as Coagulation factor VII (Fragment). Macaca mulatta (Rhesus macaque).
                                                                                                                                                    Mus musculus (Mouse)
Eukaryota; Metazoa; (
Mammalia; Eutheria; F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hydrolase; Serine protease.
NON_TER 1 1 1
NON_TER 159 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRINTS; PR00722; ĈĤYMOTRYPSIN.
SMART; SM00020; TTYP_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM;
PROSITE; PS00135; TRYPSIN_SER;
                                                                                                                                                                                                                                                                                Similar to protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Murakawa M., Okamura T., Kamura T., Kuroiwa M., Harada M., Niho Y.;
"Analysis of the partial nucleotide sequences and deduced primary
structures of the protease domains of mammalian blood coagulation
factors VII and X.":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. MEDLINE-94222160; PubMed-8168596;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutele
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
                                  SEQUENCE FROM N.A.
TISSUE-LIVER;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; D21212; BAA04753.1;
HSSP; P08709; 1FAK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              factors VII and X. Eur. J. Haematol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cercopithecinae; Macaca.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q28510
                                                                                                                        CBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001314;
InterPro; IPR001254;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEROPS; S01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 - I - SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TRYPSIN FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GSKDSCKGDSGGPHATHYRGTWYLTGIVSWGQGCATVGH 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FVRFSLVSGWGQLLDRGATALELMVLNVPRLMTQDCLQQSRKVGDSPNITEYMFCAGYSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EHEGDEQSRRVAQVIIPSTYVLGATNHDIALLRLQQPVVLTDHVVPLCLPERMFSERTLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EHDGDEQSRRVAQVIIPSTYVPGTTNHDIALLRLHQPVVLTDHVVPLCLPERTFSERTLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FVRFSLVSGWGQLLDRGATALELMALNVPRLMTQDCLQQSQKAEASPNITEYMFCAGYSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         159 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              52:162-168(1994).
ELONGS TO PEPTIDASE
                                                                                                                                                                                                                                                                                0
                                                                                                                                                        Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17454 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ser_protease_Try
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chymotrypsin.
                                                                                                                                                                                                                                                                                                             19,
19,
21,
                                                                                                                                                                                                                                                                                                   Created)
Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 781; DB 6
Pred. No. 2e-68;
3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
                                                                                                                                                 Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3F3E82731B97DFC1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                     460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  159
                                                                                                                                                                                                                                                                                                                                                                                                                                     ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6.
                                                                                                                                                                                                                                                                                                         update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 159;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ALSO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KNOWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
```

```
RESULT 15
Q99PC
ID Q99PC
AC Q99PC
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DE Antic
GN PROC.
OS Mus II
OC Eukar
OC Manma
OC Manma
OX NCBI-
RN [1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PSO0010: ASX_HYDROXYL; UNKNOWN_1.

PROSITE; PS00102: EGF_1; UNKNOWN_1.

PROSITE; PS01186; EGF_2; UNKNOWN_1.

PROSITE; PS01187; EGF_CA; UNKNOWN_1.

PROSITE; PS0011; GLU_CARBOXYLATION; UNKNOWN_1.

PROSITE; PS00240; TRYPSIN_DOM; 1.

PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.

PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.

PROSITE; PS00135; TRYPSIN_HIS; UNKNOWN_1.

PROSITE; PS00135; TRYPSIN_BER; UNKNOWN_1.

SEQUENCE 460 AA; 51818 MW; 0117F26E68FCC274 CI
Mus musculus (Mouse).
Eukaryota; Metazoa; Cl
Mammalla; Eutheria; Rc
NCBI_TaxID=10090;
[1]
                                                                                                                                                       Q99PC6;
                                                                             PROC.
                                                                                                       01-JUN-2001 (TrEMBLrel. 01-JUN-2001 (TrEMBLrel. 01-JUN-2002 (TrEMBLrel.
                                                                                            Anticoagulant protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; BC013896; MGD; MGI:97771;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (SEP-2001) to the EMBL/GenBank/DDBJ EMBL; BC013896; AAH13896.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR000294;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR001254;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR00056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            [nterPro;
                                                                                                                                                                                                                                                      451
                                                                                                                                                                                                                                                                                    394
                                                                                                                                                                                                                                                                                                                  391
                                                                                                                                                                                                                                                                                                                                                                                337
                                                                                                                                                                                                                                                                                                                                                                                                                                            277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PF00089;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PF00594; gla;
                                                                                                                                                                                                                                                   EPRPGVLLRA
: || | |::
K---GVSLKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KGECPWQVLLLVNGAQL-CGGTLINTIWVVSAAHCFDKIKNWRNLIAVLGEHDLSEHDGD
                                                                                                                                                                                                                                                                                                               GDTRDACDGDSGGPMVVFFRGTWFLVGLVSWGEGCGHTNNYGIYTKVGSYLKWIHSYIGE
                                                                                                                                                                                                                                                                                                                                    DGSKDSCKGDSGGPHATHYRGTWYLTGIVSWGQGCATVGHFGVYTRVSQYIEWLQKLMRS
                                                                                                                                                                                                                                                                                                                                                                             VVTGWGYQSDRIKDGRRNRTFI-LTFIRIPLVARNECVEVMKNV-----VSENMLCAGII
                                                                                                                                                                                                                                                                                                                                                                                                         LVSGWGQLLD-----RGATALELMVLNVPRLMTQDCLQQSRKVGDSPNITEYMFCAGYS
                                                                                                                                                                                                                                                                                                                                                                                                                                       ELDLDIKEILVHPNYTRSSSDNDIALLRLAQPATLSKTIVPICLPNNGLAQELTQAGQET
                                                                                                                                                                                                                                                                                                                                                                                                                                                         EQSRRVAQVIIPSTYVPGTTNHDIALLRLHQPVVLTDHVVPLCLPERTESERTLAFVRFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QGDSPWQAILLDSKKKLACGGVLIHTSWVLTAAHC---VEGTKKLTVRLGEYDLRRRDHW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACAPGYELADDHMRCKSTVNFPCGKLGRWIEKKRKILKRDTDLEDELEPDPRIVNGTLTK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RCHEGYSLLADGVSCTPTVEYPCGKIP--ILEKRNASK------PQGRIVGGKVCP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SPCCGHGTCIDGIGSFSCSCDKGWEGKFCQQELRFQDCRVN-NGGCLHYCLEESNGRR-C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SPCQNGGSCKDQLQSYICFCLPAFEGRNCETHKDDQLICVNENGGCEQYCSDHTGTKRSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ANSFLEEMRPGSLERECMEEICDFEEAQEIFQNVEDTLAFWIKYFDGDQCSAPPLDHQCD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ANAFLXXLRPGSLXRXCKXXQCSFXXARXIFKDAXRTKLFWISYSDGDQCAS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IPR001881;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         35.2%;
ilarity 36.7%;
Conservative 7
                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               crypsin;
                              Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                    403
                                                                                                                                                                                                                                                     457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ser_protease_Try.
VitK_dep_GLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Asx_hydroxyl.
EGF-like.
                                                                                            ဂ
                                                                                                         17,
17,
21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          79;
                                                                                                         Created)
Last sequence up
Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 769.5; |
Pred. No. 1.1e
79; Mismatches
                           Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0117F26E68FCC274 CRC64;
                                                                                                                                                                        460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          l.le-66;
nes 152;
                                                                                                                                                                        8
                                                                                                                         update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 11;
                                                                                                         update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        460;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
```

112 159 101

11;

N.A.

```
Query Match
Best Local Similarity
Matches 157; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE; PS00010; A
PROSITE; PS00022; E
PROSITE; PS01186; E
PROSITE; PS01187; E
PROSITE; PS00011; G
PROSITE; PS50240; T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_SER; 1.
Calcium-binding; EGF-like domain; Glycoprotein; Hydrolase;
Hydroxylation; Repeat; Serine protease.
SEQUENCE 460 AA; 51784 MW; 0293BC25E9D3ED16 CRC54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PRODOD1; GLABLOOD.
SMART; SMOOD1; EGF_11ke; 2.
SMART; SMOOD01; EGF_11ke; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SMART; SM00020;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Complete sequence of UC72A01.";
Submitted (NOV-2000) to the EMBL/GenBank/DDBJ databases.
-i- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM STRAIN-C57BL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EROPS; S01
394 EPRPGVLLRA 403
                                                                                                                                                                                                                                                                  277
                                                                                                                                                                                                                                                                                                                                                                          280 LVSGWGQLLD-----RGATALELMVLNVPRLMTQDCLQQSRKYGDSPNITEYMFCAGYS 333
                                                                                                                                                                                                                                                                                               220 EQSRRVAQVIIPSTYVPGTTNHDIALLRLHQPVVLTDHVVPLCLPERTFSERTLAFVRFS 279
                                                                                                                                                                                                                                                                                                                                                220 QGDSPWQAILLDSKKKLACGGVLIHTSWVLTAAHC---VEGTKKLTVRLGEYDLRRRDHW 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       113 RCHEGYSLLADGVSCTPTVEYPCGKIP--ILEKRNASK------PQGRIVGGKVCP 160
                                                                                                                                                                                                                                                                                                                                                                                                                                          160 ACAPGYELADDHMRCKSTVNFPCGKLGRWIEKKRKILKRDTDLEDELEPDPRIVNGTLTK 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      102 SPCCGHGTCIDGIGSFSCSCDKGWEGKFCQQELRFQDCRVN-NGGCLHYCLEESNGRR-C 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  53 SPCQNGGSCKDQLQSYICFCLPAFEGRNCETHKDDQLICVNENGGCEQYCSDHTGTKRSC 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42 ANSFLEEMRPGSLERECMEEICDLEEAQEIFQNVEDTLAFWIKYFDGDQCSAPPLDHQCD 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ANAFLXXLRPGSLXRXCKXXQCSFXXARXIFKDAXRTKLFWISYSDGDQCAS------ 52
                                                               VVTGWGYQSDRIKDGRRNRTFI-LTFIRIPLVARNECVEVMKNV-----VSENMLCAGII 390
                                                                                                                                                                                                                                                   ELDLDIKEILVHPNYTRSSSDNDIALLRLAGPATLSKTIVPICLPNNGLAGELTQAGQET 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ); Tryp_SPc; 1.
)210; ASX_NYDROXYL; 1.
)212; EGF_1; UNKNOWN_1.
186; EGF_2; 2.
187; EGF_CA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHYMOTRYPSIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAK07918.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GLU_CARBOXYLATION; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34.9%; Score 763.5; DB 11; Length 460;
36.5%; Pred. No. 4.4e-66;
tive 79; Mismatches 153; Indels 41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VitK_dep_GLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

밁 451 K---GVSLKS 457

Search completed: July 1, 2003, 17:53:45 Job time: 83 secs